# Sugar Branch (1029 & 1030) Use Attainability Analysis



Boone County Regional Sewer District 1314 North 7<sup>th</sup> Street Columbia, MO 65201-3902

Prepared by
Barr Engineering Company
July 2005

## Sugar Branch (1029 & 1030)

Use Attainability Analysis

**Boone County Regional Sewer District** 1314 North 7<sup>th</sup> Street Columbia, MO 65201-3902

July 2005



**Barr Engineering Company** 3236 Emerald Lane Jefferson City, MO 65109 Phone: (573) 636-5331 Fax: (573) 636-5323

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## Field Data Sheets for Recreational Use Stream Surveys

## WATER PROTECTION PROGRAM

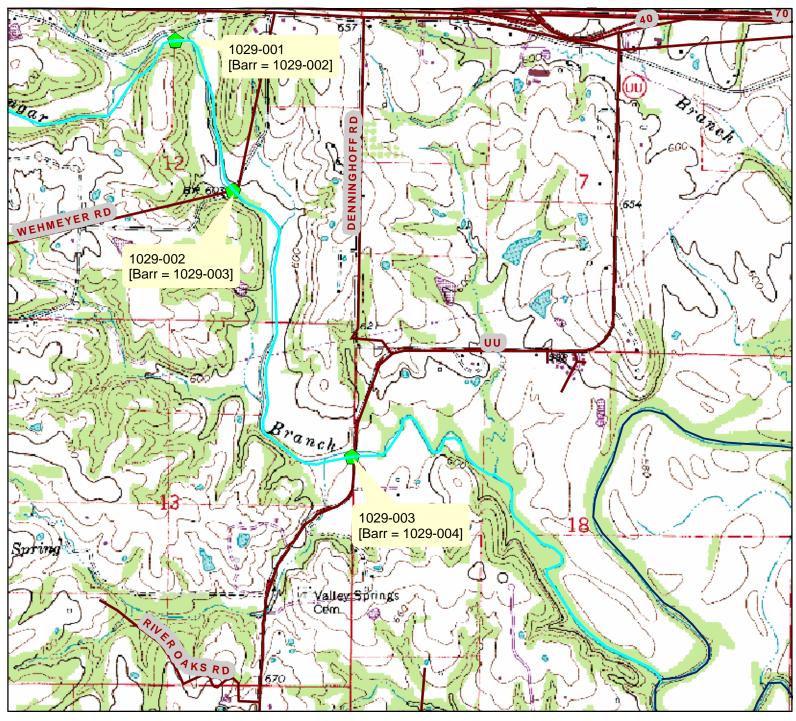
### Data Sheet A - Water Body Identification

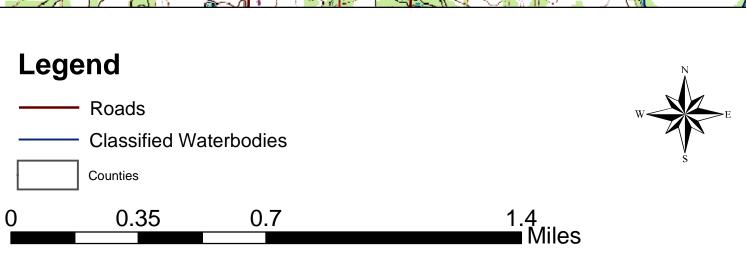
Water Body Name (from USGS 7.5' quad): Sugar Branch
8-digit HUC: 10300102
Missouri WBID #: 1029 and 1030
County: Boone
Upstream Legal Description: Interstate Highway 70 Crossing (NE 1/4 Section 10, T48N, R14W)
Downstream Legal Description: Mouth (in SE 1/4 Section 18, T48N, R13W)
Upstream Coordinates: UTM (Z15N) 545250E; 4313873N
Downstream Coordinates: UTM (Z15N) 549896E; 4310607N
Discharger Facility Name(s): Boone County Regional Sewer District-Rollingwood Subdivision Plt 2, Permit # MO0038806 Boone County Regional Sewer District-Trails West Subdivision, Permit # MO0092002 Total Restoration Company, Permit # MO0124711
Discharger Permit Number(s): See Above.
Number of Sites Evaluated: 4
Name of Surveyor and Telephone Number: Alan Fandrey (573-638-5013)
Organization: Barr Engineering Company
Position: Civil Engineer

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

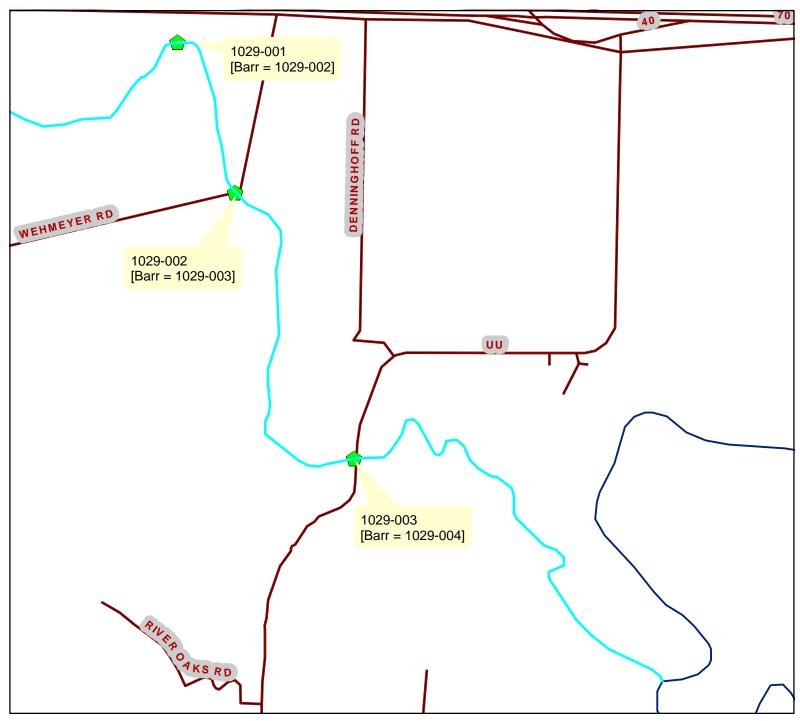
Signed:	alan	Paul	? <del>?</del>	Date:	Thre	29,2005	
		4	•				

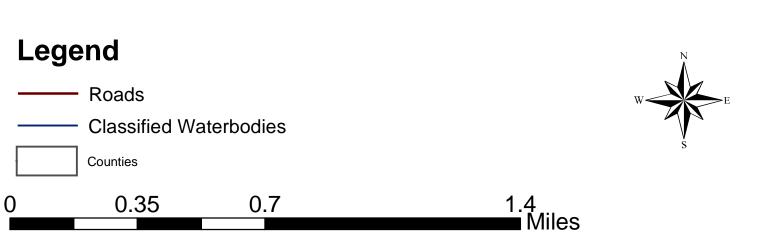
## Sugar Branch (P) #1029 Boone County HUC 8 = 10300102



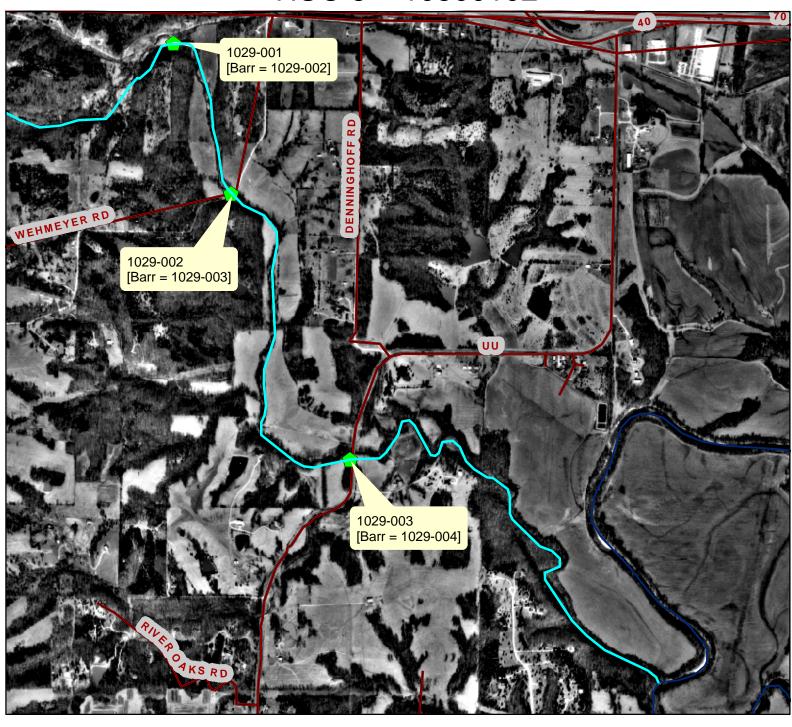


## Sugar Branch (P) #1029 Boone County HUC 8 = 10300102





## Sugar Branch (P) #1029 Boone County HUC 8 = 10300102







1.4 ■ Miles

#### **Data Sheet B - Site Characterization**

(A separate data sheet must be completed for each site)

	Missouri WBID#: 1029-	-001				cription: Sugar Branch at	
	Site GPS Coordinates: 54	15250E; 4313873N		County	in NE	2 1/4 Section 10, T48N, R14	W; BID 26 – Boone
	Date & Time: 05/27/05 -	8:20 a.m.		Facility Name: See Table 2			
	Personnel: Tim J. Fandre	у		Permit Num	ber:	See Table 2	
	Current Weather Condition	ons: Clear - 70s		Weather Co	nditio	ons for Past 7 days: Last ra	in on May 22
	Photo Ids: Upstream: 10	29-001US Dow	nstream: 10	29-001DS C	Other:		
				•			
Us	es Observed*:						_
	Swimming	☐ Skin diving		CUBA diving		☐ Tubing	☐ Water skiing
	☐ Wind surfing	☐ Kayaking	□ Во	oating		☐ Wading	Rafting
	☐ Hunting	☐ Trapping	☐ Fis	shing		None of the above	Other:
	rrounding Condition as of interest.)	<b>S*:</b> (Mark all that p	promote or in	npede recreation	nal us	es. Attach photos of evider	nce or unusual
	☐ City/county parks	☐ Playgrounds	☐ MDC co	onservation land	ds	☐ Urban areas	☐ Campgrounds
	☐ Boating accesses	☐ State parks	☐ Nationa	l forests		☐ Nature trails	☐ Stairs/walkway
	☐ No trespass sign	☐ Fence	☐ Steep sl	opes		Other:	
Ev	idence of Human Use	2*•					
	⊠ Roads	☐ Foot paths/prir	nts 🔲 I	Dock/platform		☐ Livestock Watering	RV / ATV Tracks
	☐ Rope swings	☐ Camping Sites	I	Fire pit/ring		☐ NPDES Discharge	☐ Fishing Tackle
	Other:						

<sup>\*</sup>Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

### Data Sheet B - Site Characterization

Page Two – WBID #<u>1029-001</u>:

Stream Mor Upstream	phology: View Physical Di	mensions:				
⊠ Riffle	Width (ft): 0.5	Length (ft): 3.0	Avg. Depth (f	t): 0.1	Max. Depth (ft):	0.1
Run	Width (ft):	Length (ft):	Avg. Depth (f	t):	Max. Depth (ft):	
☐ Pool	Width (ft):	Length (ft):	Avg. Depth (f	t):	Max. Depth (ft):	
⊠ Flow	Present? X Yes	□No	Estimated (ft <sup>3</sup>	/sec): < 0.1		
Downstre	am View Physical	Dimensions:				
⊠ Riffle	Width (ft): 0.7	Length (ft): 2.0	Avg. Depth (f	t): 0.1	Max. Depth (ft):	0.1
Run	Width (ft):	Length (ft):	Avg. Depth (f	t):	Max. Depth (ft):	
☐ Pool	Width (ft):	Length (ft):	Avg. Depth (f	t):	Max. Depth (ft):	
⊠ Flow	Present? Yes	□No	Estimated (ft <sup>3</sup>	/sec): Same	as above	
	(These values should & Cobble 60%		9% Sand	% Silt	30% Mud/Clay	% Bedrock
					<del></del>	
<u> </u>	getation*: (note amo	unt of vegetation or alg	gal growth at the asses	ssment site)		
None						
	racteristics*: (Mark			<b>⊠</b> 37		•
Odor:	☐ Sewage	☐ Musky	☐ Chemical ☐ Gray	None     Milky	Other:	
Color: Bottom De		Solids	Fine sediments	None	Other:	
Surface De		Scum	Foam	None	Other:	
*This informat	tion is not to be used so understanding of wate	elely for removal of a re-	ecreational use design ently, this information	ation but rath	terviews) to this form  ter is to provide a more ded to directly influence that effect another use.	
datasheet is	rsigned, hereby aff		_	hat all info May 27, 20	ormation reported (	on this UAA
Signed:Organization	n: Barr Engineerin	g Company		1: <u>Eng</u>		



Photo ID 1029-001US: Upstream (Sugar Branch)



Photo ID 1029-001DS: Downstream (Sugar Branch)

#### **Data Sheet B - Site Characterization**

(A separate data sheet must be completed for each site)

Missouri WBID #: 1029-	002			escription: Sugar Branch ad	
Site GPS Coordinates: 54	17812E; 4313739N		Section 12; T481	N; R14W; BID 28 – Boone	County
Date & Time: 06/26/05 -	3 p.m.		Facility Name: 5	See Table 2	
Personnel: Alan J. Fandre	ey		Permit Number:	See Table 2	
Current Weather Condition	ons: Clear - 90s		Weather Conditi	ions for Past 7 days: Last ra	nin on June 13
Photo Ids: Upstream: 10	29-002US Dow	nstream: 102	9-002DS Other	::	
_					
Uses Observed*:		<u>,                                      </u>			
Swimming	☐ Skin diving	☐ SCU	JBA diving	☐ Tubing	☐ Water skiing
☐ Wind surfing	☐ Kayaking	☐ Boa	nting	Wading	Rafting
Hunting	☐ Trapping	☐ Fish	ning	None of the above	Other:
S	<b>S*:</b> (Mark all that p	promote or imp	pede recreational u	uses. Attach photos of evide	nce or unusual
S	S*: (Mark all that p		pede recreational unservation lands	uses. Attach photos of evide	nce or unusual
items of interest.)	`		nservation lands	T	1
items of interest.)  City/county parks	☐ Playgrounds	☐ MDC cor	nservation lands	Urban areas	☐ Campgrounds
items of interest.)  City/county parks  Boating accesses  No trespass sign	☐ Playgrounds ☐ State parks ☐ Fence	☐ MDC cor	nservation lands	☐ Urban areas ☐ Nature trails	☐ Campgrounds
☐ Boating accesses	☐ Playgrounds ☐ State parks ☐ Fence	☐ MDC cor ☐ National: ☐ Steep slop	nservation lands	☐ Urban areas ☐ Nature trails	☐ Campgrounds
items of interest.)  City/county parks  Boating accesses  No trespass sign  Evidence of Human Use	☐ Playgrounds ☐ State parks ☐ Fence	☐ MDC cor ☐ National: ☐ Steep slop	nservation lands forests pes	☐ Urban areas ☐ Nature trails ☐ Other:	☐ Campgrounds ☐ Stairs/walkway

<sup>\*</sup>Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

## Data Sheet B - Site Characterization

Page Two - WBID #<u>1029-002</u>:

Stream Moi	rphology:	:					
			imensions:				
Riffle	Width (fl		Length (ft): 5	Avg. Depth	(ft): < 0.1	Max. Depth (ft)	. 0.1
Run	Width (ft	):	Length (ft):	Avg. Depth	(ft):	Max. Depth (ft)	
⊠ Pool	Width (ft	): 8	Length (ft): 30		<del>``</del>	Max. Depth (ft)	
⊠ Flow	Present?	⊠ Yes	☐ No	Estimated (1	<u> </u>	Mux. Depth (1)	. <i>2.J</i>
D	* * * * * * * * * * * * * * * * * * *						
			Dimensions:	<u> </u>			
Riffle	Width (ft)		Length (ft):	Avg. Depth	(ft):	Max. Depth (ft)	•
Run	Width (ft)	): 	Length (ft):	Avg. Depth	(ft):	Max. Depth (ft):	
N Pool	Width (ft)	): 10	Length (ft): 50	Avg. Depth	(ft): 0.8	Max. Depth (ft)	: 1.1
⊠ Flow	Present?	⊠ Yes	□No	Estimated (f	t <sup>3</sup> /sec): 0.1		<del></del>
iuhetrata*.	(Those wel		11	·			
30%	6 Cobble		add up to 100%.) 6 Gravel	200/ 5 1			
	000010		o Glavet	20% Sand	% Silt	% Mud/Clay	% Bedrocl
	acteristic	_	all that apply.)	<u> </u>			
Odor:	<u>_</u>	Sewage	Musky	☐ Chemical	None     Non	Other:	
Color:		Clear	Green	Gray	☐ Milky	Other:	
Bottom Dep		Sludge	Solids	Fine sediments	None     Non	Other:	
Surface De	posit:	] Oi <u>l</u>	Scum	☐ Foam	None	Other:	<u> </u>
This information in the relation on the r	on is not to understandiffected understanding fector of the control of the contro	be used solong of water se analysis	ely for removal of a conditions. Consequent but may point to cor	recreational use design uently, this information ditions that need further my knowledge, the	ation but rathen is not intende er analysis or the nat all inform	ed to directly influence hat effect another use.  mation reported o	a
ignea:	san /	an	<del></del>	Date:J	<u>une 27, 200</u>	5	
rganization:	Barr Eng	gineering	Company	Position	:Engin	eer	
				•	-		
						•	
					10 Te - 10 Te		



Photo ID 1029-002US: Upstream (Sugar Branch)



Photo ID 1029-002DS: Downstream (Sugar Branch)

#### **Data Sheet B - Site Characterization**

(A separate data sheet must be completed for each site)

Missouri WBID #: 1029-	003			escription: Sugar Branch at	•	
Site GPS Coordinates: 54	18005E; 4313010N		Section 12, 1481	N, R14W; BID 27 – Boone	County	
Date & Time: 05/27/05 -	8:50 a.m.		Facility Name: See Table 2			
Personnel: Tim J. Fandre	у		Permit Number: See Table 2			
Current Weather Condition	ons: Clear - 70s		Weather Conditi	ions for Past 7 days: Last ra	in on May 22	
Photo Ids: Upstream: 10	29-003US Dow	nstream: 102	9-003DS Other	:		
	<b>,</b>		<b>-</b>			
Jses Observed*:				To	T —	
Swimming	☐ Skin diving	☐ SCU	JBA diving	☐ Tubing	☐ Water skiing	
☐ Wind surfing	☐ Kayaking	☐ Boa	nting	□ Wading	Rafting	
Hunting	☐ Trapping	☐ Fish	ning	None of the above	Other:	
Surrounding Conditions	<b>s*:</b> (Mark all that p	romote or imp	pede recreational u	uses. Attach photos of evide	nce or unusual	
☐ City/county parks	Playgrounds	☐ MDC cor	nservation lands	☐ Urban areas	Campgrounds	
☐ Boating accesses	☐ State parks	☐ National	forests	☐ Nature trails	☐ Stairs/walkway	
☑ No trespass sign	⊠ Fence	☐ Steep slop	pes	Other:	1	
Evidence of Human Use	2*•					
⊠ Roads	☐ Foot paths/prin	nts D	ock/platform	☐ Livestock Watering	RV / ATV Tracks	
☐ Rope swings	☐ Camping Sites	☐ Fi	re pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	
Other:						
_ other.						

<sup>\*</sup>Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

## Data Sheet B - Site Characterization

## Page Two - WBID #<u>1029-003</u>:

	ream Mor Upstream			Dimensions:				
	Riffle	Width (ft)		Length (ft);	Avg. Dept	h (ft):	Max. Depth (ft)	
	Run	Width (ft)	):	Length (ft);	Avg. Deptl		Max. Depth (ft):	
	⊠ Pool	Width (ft)	: 2.0	Length (ft): 8	Avg. Depti		Max. Depth (ft):	<del> </del>
	⊠ Flow	Present?	⊠ Yes	□No		(ft <sup>3</sup> /sec): 0.2	Max. Depui (II):	: I.I
	Downstre	am View	Physics	l Dimensions:				
	⊠ Riffle	Width (ft)		Length (ft): 2.0	Avg. Depth	n (ft): 0.15	Max. Depth (ft):	0.2
	Run	Width (ft)	:	Length (ft):	Avg. Depti	<del></del>	Max. Depth (ft):	
	Pool	Width (ft)	:	Length (ft):	Avg. Depth		Max. Depth (ft):	·
	⊠ Flow	Present?	X Yes	□No		(ft <sup>3</sup> /sec): 0.2	Max. Depth (1t).	
~ .							<u> </u>	<u></u>
Su	bstrate*:	(These val. Cobble	ues should	add up to 100%.)	-			
l	10%	Copple	80	% Gravel	10% Sand	% Silt	% Mud/Clay	% Bedrock
Wa I		acteristic		all that apply.)				
ŀ	Odor: Color:		Sewage	☐ Musky	Chemical	None	Other:	
ŀ	Bottom Der		Clear	Green	Gray	Milky	Other:	
-	Surface Dep		Sludge Oil	Solids Scum	Fine sediments		Other:	
L	Surrace Dop	posit,	1011		Foam	None None	Other:	
*Th com leci l, tl	is information prehensive usion on the r	on is not to understanding ecreation uniqued, he	be used so ng of wate se analysis	lely for removal of a reconditions. Conseque but may point to con	ecreational use designently, this information ditions that need furth my knowledge, the control of the control	nation but rather on is not intended her analysis or the that all inform	d to directly influence nat effect another use.  mation reported o	a
лg.	neu;		<u> </u>	1 aug	Date:	May 27, 2005	5	
Org	anization:	Barr Eng	gineering	Company	Positio	n: Engin	eer	

September 29, 2004

Last printed 6/15/2005 4:42:00 PM



Photo ID 1029-003US: Upstream (Sugar Branch)



Photo ID 1029-003DS: Downstream (Sugar Branch)

#### **Data Sheet B - Site Characterization**

(A separate data sheet must be completed for each site)

Missouri WBID #: 1029-	004			scription: Sugar Branch at		
Site GPS Coordinates: 54	8525E; 4311860N		east line Section	13, T48N, R14W); BID 31	– Boone County	
Date & Time: 05/27/05 -	1:30 p.m.		Facility Name: S	See Table 2		
Personnel: Tim J. Fandre	y		Permit Number: See Table 2			
Current Weather Condition	ons: Partly Cloudy -	70s	Weather Conditi	ons for Past 7 days: Last ra	nin on May 22	
Photo Ids: Upstream: 102	29-004US Down	nstream: 102	9-004DS Other	:		
	1		1			
Uses Observed*:				T	T	
Swimming	☐ Skin diving	☐ SCU	JBA diving	☐ Tubing	☐ Water skiing	
☐ Wind surfing	☐ Kayaking	☐ Boa	nting	□ Wading	Rafting	
Hunting	☐ Trapping	☐ Fish	ning	None of the above	Other:	
S	<b>s*:</b> (Mark all that p	romote or imp	oede recreational u	ses. Attach photos of evide	nce or unusual	
S	S*: (Mark all that pr		oede recreational unservation lands	ses. Attach photos of evide	nce or unusual	
items of interest.)	` .		nservation lands		1	
items of interest.)  City/county parks	☐ Playgrounds	☐ MDC con	nservation lands	Urban areas	☐ Campgrounds	
items of interest.)  City/county parks  Boating accesses  No trespass sign	☐ Playgrounds ☐ State parks ☐ Fence	☐ MDC con	nservation lands	☐ Urban areas ☐ Nature trails	☐ Campgrounds	
items of interest.)  City/county parks  Boating accesses  No trespass sign	☐ Playgrounds ☐ State parks ☐ Fence	☐ MDC con ☐ National :	nservation lands	☐ Urban areas ☐ Nature trails	☐ Campgrounds	
☐ Boating accesses ☐ No trespass sign  Evidence of Human Use	☐ Playgrounds ☐ State parks ☐ Fence	☐ MDC con ☐ National t ☐ Steep slop  ts ☐ De	nservation lands forests pes	☐ Urban areas ☐ Nature trails ☐ Other:	☐ Campgrounds ☐ Stairs/walkway	

<sup>\*</sup>Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

## Data Sheet B - Site Characterization

### Page Two - WBID #1029-004:

eam Morpholog Upstream View	·-	ensions:					
Riffle Width	(ft):	Length (ft):	Avg. Depth (	(ft):	Ma	x. Depth (ft):	
Run Width	(ft):	Length (ft):	Avg. Depth (	(ft):	Ma	x. Depth (ft):	
☑ Pool Width	(ft): 17.0	Length (ft): 30.0	Avg. Depth (	(ft): 0.2	Ma	x. Depth (ft): 0	).4
⊠ Flow Presen	t? 🛛 Yes [	] No	Estimated (ft	<sup>3</sup> /sec): 0.3			
Downstream Vi	ew Physical F	)imensions:					
Riffle Width		Length (ft):	Avg. Depth (	(ft):	Ma	ax. Depth (ft):	
Run Width	(ft): 1.5	Length (ft): 11.0	Avg. Depth (	(ft): 0.2	Ma	x. Depth (ft): (	).3
Pool Width	(ft):	Length (ft):	Avg. Depth (	(ft):	Ma	ax. Depth (ft):	
☐ Flow Presen	ıt? 🛛 Yes 🛭	□ No	Estimated (ft	t <sup>3</sup> /sec): 0.3			
bstrate*: (These	values should ad						
% Cobbl	e 50%	Gravel 5	0% Sand	% Silt	% M	lud/Clay	% Bedroc
uatic Vegetatio None			igai growth at the asse	essment site)			
None ater Characteri	stics*: (Mark a	ll that apply.)				Other:	
None  ater Characteri  Odor:	stics*: (Mark a	ll that apply.)	☐ Chemical	⊠ None		Other:	
Ater Characteri Odor: Color:	stics*: (Mark a ☐ Sewage  ☑ Clear	ll that apply.)  Musky Green	☐ Chemical ☐ Gray	⊠ None		Other:	
Ater Characteri Odor: Color: Bottom Deposit: Surface Deposit:	stics*: (Mark a Sewage Clear Sludge	Il that apply.)  Musky Green Solids Scum	Chemical Gray Fine sediments Foam	None     Milky     None     None		Other: Other:	
None  Ater Characteri Odor: Color: Bottom Deposit: Surface Deposit: omments: Please This information is no imprehensive undersi cision on the recreat the undersigned atasheet is true a	stics*: (Mark all Sewage Sludge Oil attach addition to be used sole anding of water ion use analysis by the contract of the co	Il that apply.)    Musky   Green   Solids   Scum  onal comments (including the conditions of a condition of a c	Chemical Gray Fine sediments Foam Including informat recreational use designmently, this information ditions that need furth	None  Milky None  None  None  ion from intendent in sort intendent intenden	er is to pr ed to dire that effec	Other: Other: Other: Other: ovide a more extly influence ast another use.	ı
Ater Characteri Odor: Color: Bottom Deposit: Surface Deposit: omments: Please this information is no imprehensive undersi cision on the recreat the undersigned itasheet is true a	Stics*: (Mark a	Il that apply.)    Musky   Green   Solids   Scum  onal comments (incomments of a conditions. Consequent may point to consequent may be conditions.    Musky	Chemical Gray Fine sediments Foam Including informat recreational use designmently, this information ditions that need furth	None  Milky  None  None  Ination from intending is not intended her analysis or that all information in the control of that all information in the control of the control o	er is to pred to direct that effect rmation	Other: Other: Other: Other: ovide a more ectly influence a another use.	n this UAA



Photo ID 1029-004US: Upstream (Sugar Branch)



Photo ID 1029-004DS: Downstream (Sugar Branch)